Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Per.: \_\_\_\_\_\_\_\_

**2.6 Coordinate Geometry Part I: Segment Addition**

Directions: For #1 and #2, you may use the graph paper but it is not required.

1. Find the midpoint of the segment with endpoints:

a. (3,5) and (11,7) b. (-2,1) and (-6,5) c. (-3,5) and (-7,-3)

2. Find the length of the line segment with endpoints:

a. (3,2) and (7,5) b. (1,2) and (7,-6) c. (2,4) and (6,2)

Directions: For #3, #4 draw each figure on your graph paper but record answers here.

3. A triangle has vertices A(1,1), B(-2,-3), and C(5,-2).

a. Find the length of each side (AB, BC, AC).

b. What kind of triangle is it? **Justify your answer using the sides lengths from Part a.**

(*Remember: equilateral 🡪 3 sides of equal length; isosceles 🡪 two sides of equal length; scalene 🡪 zero sides of equal length*)

**Please turn over.**

4. A quadrilateral (four-sided polygon) has vertices P(0,2), Q(2,-1), R(8,3), and S(6,6).

a. What can you determine about the opposite sides of PQRS? Show work to

support your answer.

b. What can you determine about the diagonals of PQRS? Show work to

support your answer.